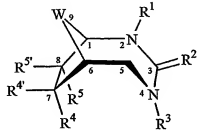
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the formula (I):



(I)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^1 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(e) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(f) R^3 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(g) alternatively if R^2 is NR', then R^1 or R^3 can come together with NR' to form a substituted or unsubstituted 5-7 membered ring that can include one or more heteroatoms; or

(h) if R^2 is CR'_2, then R^1 or R^3 can come together with CR'_2 to form a substituted or unsubstituted 5-7 membered ring that can include one or more heteroatoms; or

(i) if R^2 is CR'_2, then R^1 and R^3 can come together with CR'_2 to form a substituted or unsubstituted bicyclic ring that can include one or more heteroatoms; and

(j) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier.

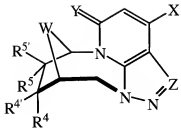
2. (Withdrawn): The method of claim 1, wherein R^5 and/or $R^{5'}$ is OH.

3. (Withdrawn): The method of claim 1, wherein R^5 or $R^{5'}$ is a residue of an amino acid.

4. (Withdrawn): The method of claim 3, wherein the amino acid is valine.

5. (Withdrawn): The method of claim 3, wherein the amino acid is L-valine.

6. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the general formula 1 (A-D), 2 (A-D), 3 (A-B), 4 (A-B), 5 (A-B), 6 (A-B), 7 (A-C) or 8 (A):



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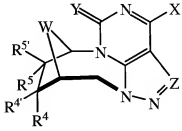

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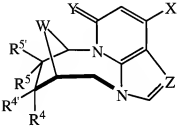

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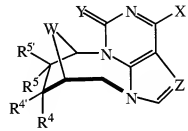

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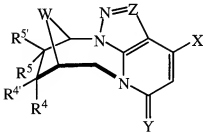

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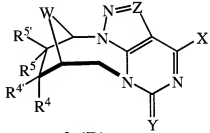

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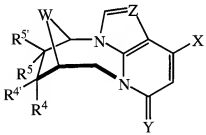

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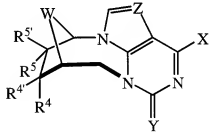

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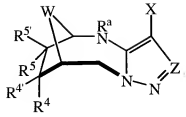

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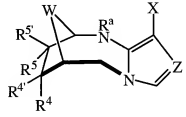

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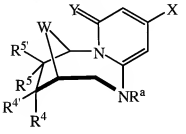

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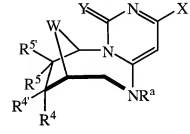

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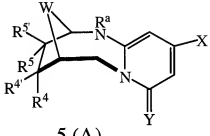

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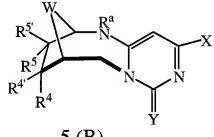

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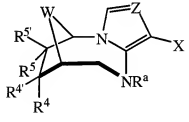

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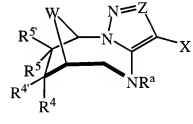

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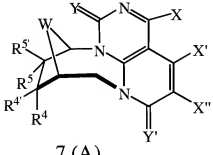

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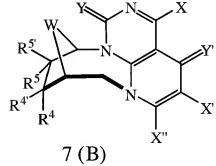

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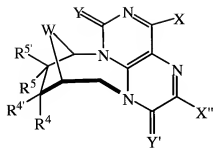
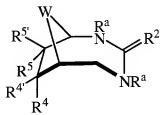


7 (C)



8 (A)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I) pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(e) Z is CH, CX, or N;

(f) each X, X', and X" is independently hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(g) each Y and Y' is independently O, S, NH, NR^c, NOR^c, or Se;

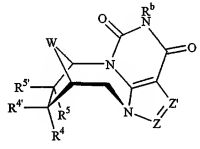
(h) each R^a is independently hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(i) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(j) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier.

7. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the general formula:



or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl,

alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(e) each Z and Z' is independently CH, CX, or N;

(f) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

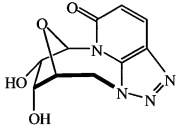
(g) R^b is R^c, OR^c, NH_2, NHR^c, or $NR^cR^{c'}$;

(h) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(i) W is O or CH_2;

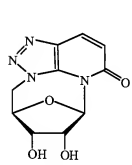
optionally with a pharmaceutically acceptable carrier.

8. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the formula:



or a pharmaceutically acceptable salt thereof, optionally with a pharmaceutically acceptable carrier.

9. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the formula: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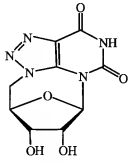
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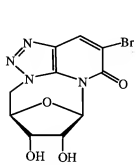
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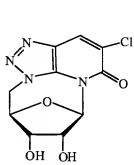
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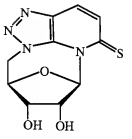
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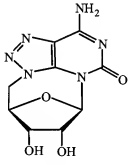
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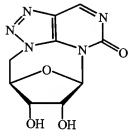
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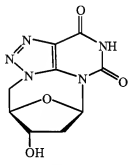
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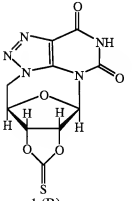
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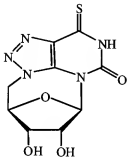
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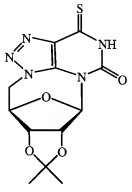
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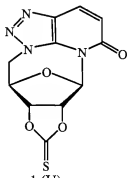
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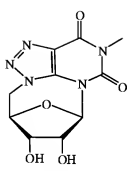
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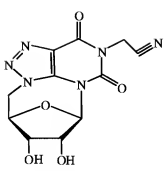
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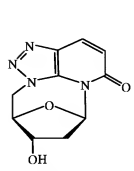
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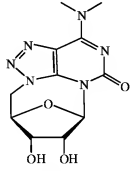
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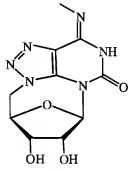
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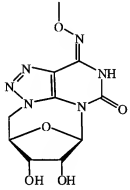
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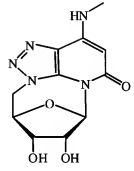
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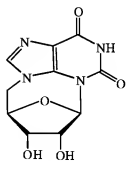
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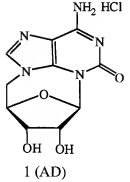
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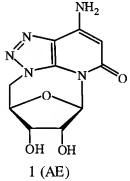
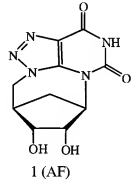

1 (AE)


1 (AF)

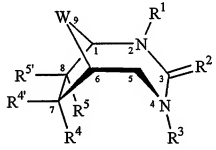
or a pharmaceutically acceptable salt thereof, optionally with a pharmaceutically acceptable carrier.

10. (Withdrawn): The method of any one of claims 1, 6, 7, 8, or 9, further comprising administering to the host in combination and/or alternation one or more effective anti-viral agents, optionally with a pharmaceutically acceptable carrier.

11. (Withdrawn): The method of claim 10, wherein the anti-viral agent is selected from the group consisting of ribavirin, interferon, pegylated interferon alfa –2a, interferon alfacon-1, natural interferon, albinterferon alpha 2b,interferon beta-1a, omega interferon, oral interferon alpha, interferon gamma-1b, interleukin-10, merimebodib, amantadine, hepatitis C immune globulin, levovirin, viramidine, thymosin alfa-1, histamine dihydrochloride, and telaprevir.

12. (Withdrawn): The method of any one of claims 1, 6, 7, 8, or 9, wherein the host is a human.

13. (Currently Amended): A compound of the formula (I):



(I)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl,

alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^1 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(e) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(f) R^3 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(g) alternatively if R^2 is NR', then R^1 or R^3 can come together with NR' to form a substituted or unsubstituted 5-7 membered ring that can include one or more heteroatoms; or

(h) if R^2 is CR'_2, then R^1 or R^3 can come together with CR'_2 to form a substituted or unsubstituted 5-7 membered ring that can include one or more heteroatoms; or

(i) if R^2 is CR'_2, then R^1 and R^3 can come together with CR'_2 to form a substituted or unsubstituted bicyclic ring that can include one or more heteroatoms; and

(j) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier; provided that when W is O, $R^{4'}$ is hydroxyl, and R^1, R^3, R^4, R^5, and $R^{5'}$ are hydrogen, R^2 is not NH and that when R^2 is CR'_2, W is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5

is hydrogen, the bicyclic ring formed is not a xanthinyl ring wherein R^1 and R^2 form together the five-membered ring or an 8-azaxanthinyl ring wherein R^2 and R^3 form together the five-membered ring.

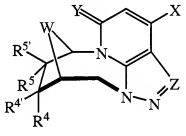
14. (Original): The compound of claim 13, wherein R^5 and/or $R^{5'}$ is OH.

15. (Original): The compound of claim 13, wherein R^5 or $R^{5'}$ is a residue of an amino acid.

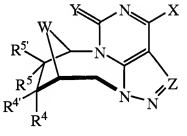
16. (Original): The compound of claim 15, wherein the amino acid is valine.

17. (Original): The compound of claim 15, wherein the amino acid is L-valine.

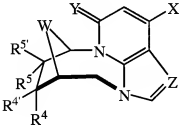
18. (Currently Amended): A compound of the general formula 1 (A-D)~~, 2 (A-D), 3 (A-B), 4 (A-B), 5 (A-B), 6 (A-B), 7 (A-C) or 8 (A)~~:



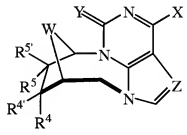
1 (A)



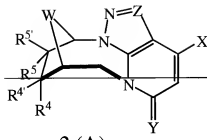
1 (B)



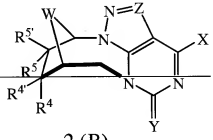
1 (C)



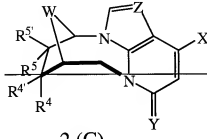
1 (D)



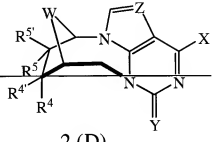
2 (A)



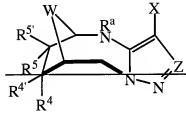
2 (B)



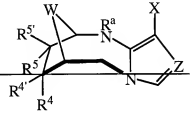
2 (C)



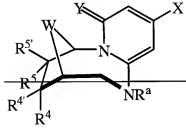
2 (D)



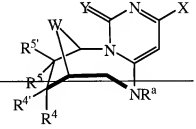
3 (A)



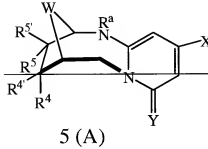
3 (B)



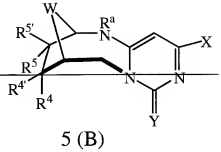
4 (A)



4 (B)

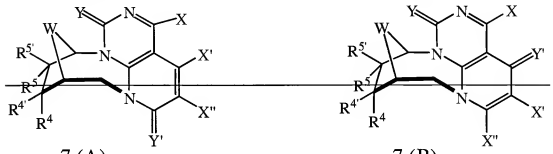


5 (A)

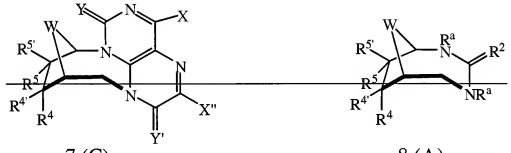


5 (B)

6 (A) 6 (B)



7 (A) 7 (B)



7 (C) 8 (A)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

~~(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;~~

(d[[e]]) Z is CH, CX, or N;

(e[[f]]) ~~each X, X', and X"~~ is ~~independently~~ hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(f[[g]]) ~~each~~ Y ~~and Y'~~ is ~~independently~~ O, S, NH, NR^c, NOR^c, or Se;

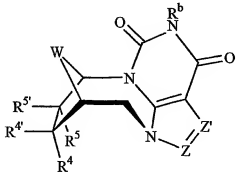
~~(h) each R^a is independently is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;~~

(g[[i]]) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(h[[j]]) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier; provided that for compounds of formula 1 (B), when X is OH, Y is O, W is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N.

19. (Currently Amended): A compound of the general formula:



or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

~~(d) R^2 is oxygen, sulfur, NR', or CR'$_2$, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;~~

(d[[e]]) ~~each~~ Z ~~and Z'~~ is ~~independently~~ CH, CX, or N and Z' is CH or CX;

(e[[f]]) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

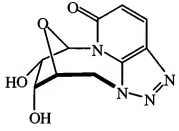
(f[[g]]) R^b is R^c, OR^c, NH_2, NHR^c, or $NR^cR^{c'}$;

(g[[h]]) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(h[[i]]) W is O or CH_2;

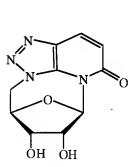
optionally with a pharmaceutically acceptable carrier.

20. (Previously Presented): A compound of the formula:



or a pharmaceutically acceptable salt thereof, optionally with a pharmaceutically acceptable carrier.

21. (Currently Amended): A compound of the formula:



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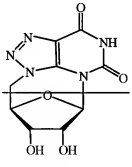
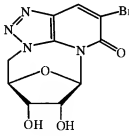
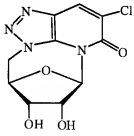


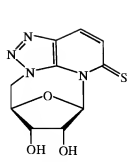
1 (K)



1 (L)



1 (M)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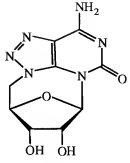
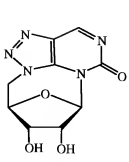
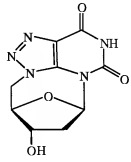
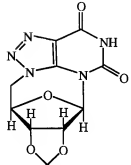

1 (O)


1 (P)


1 (Q)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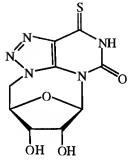
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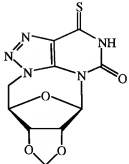
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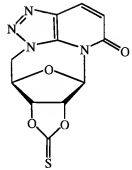
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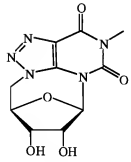
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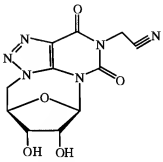
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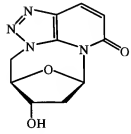
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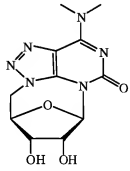
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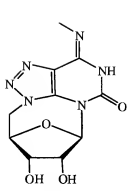
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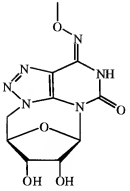
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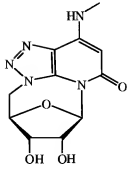
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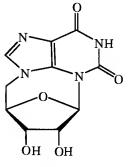
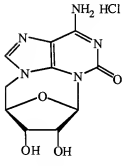
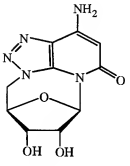
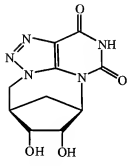

1 (AC)


1 (AD)


1 (AE)


1 (AF)

or a pharmaceutically acceptable salt thereof, optionally with a pharmaceutically acceptable carrier.

22. (Currently Amended): A pharmaceutical composition comprising an effective amount of any one of the compounds of claims 13, 18, 19, 20, [[or]] 21, 25, 26, 27, 29, 30, 33, 34, or 36 together with a pharmaceutically acceptable carrier.

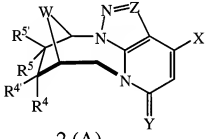
23. (Currently Amended): A pharmaceutical composition comprising an effective amount of any one of the compounds of claims 13, 18, 19, 20, [[or]] 21, 25, 26, 27, 29, 30, 33, 34, or 36 together with one or more effective anti-viral agents, optionally with a pharmaceutically acceptable carrier.

24. (Previously Presented): The pharmaceutical composition of claim 23, wherein the anti-viral agent is selected from the group consisting of ribavirin, interferon,

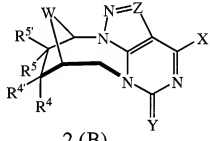
pegylated interferon alfa –2a, interferon alfacon-1, natural interferon, albinterferon alpha 2b,interferon beta-1a, omega interferon, oral interferon alpha, interferon gamma-1b, interleukin-10, merimebodib, amantadine, hepatitis C immune globulin levovirin, viramidine thymosin alfa-1, histamine dihydrochloride, and telaprevir.

25. (New): The compound of claim 13, wherein W is oxygen.

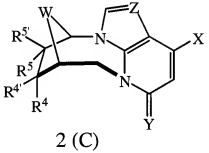
26. (New): A compound of the general formula 2 (A-D), 3 (A-B), 4 (A-B), 5 (A-B), 6 (A-B), 7 (A-C), or 8 (A):



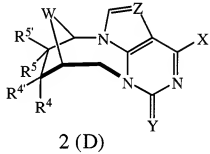
2 (A)



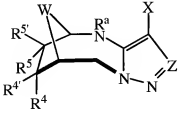
2 (B)



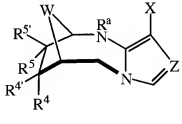
2 (C)



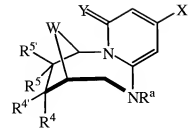
2 (D)



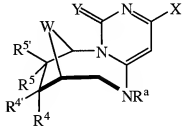
3 (A)



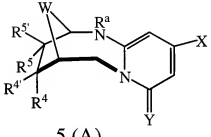
3 (B)



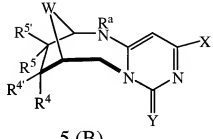
4 (A)



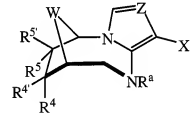
4 (B)



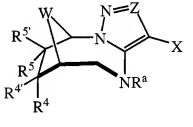
5 (A)



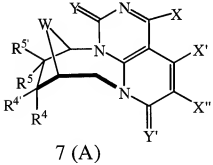
5 (B)



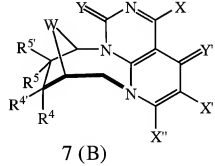
6 (A)



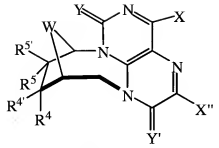
6 (B)



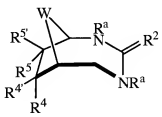
7 (A)



7 (B)



7 (C)



8 (A)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(e) Z is CH, CX, or N;

(f) each X, X', and X" is independently hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(g) each Y and Y' is independently O, S, NH, NR^c, NOR^c, or Se;

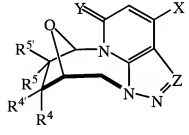
(h) each R^a is independently hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(i) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

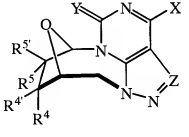
(j) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier; provided that for compounds of formula 2 (D), when X is OH, Y is O, W is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N and for compounds of formula 8 (A), when R^2 is NH, R^a is hydrogen, W is O, and R^4, R^5, and $R^{5'}$ are hydrogen, $R^{4'}$ is not hydroxyl.

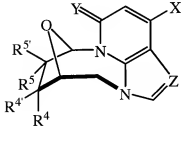
27. (New): A compound of the general formula 1 (E-H):



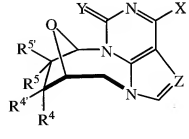
1 (E)



1 (F)



1 (G)



1 (H)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

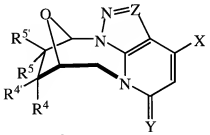
(f) Y is O, S, NH, NR^c, NOR^c, or Se; and

(g) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl;

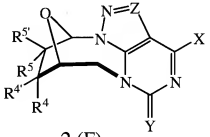
optionally with a pharmaceutically acceptable carrier provided that for compounds of formula 1 (F), when X is OH, Y is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N.

28. (New): A compound of claim 27 wherein the compound is of formula 1H.

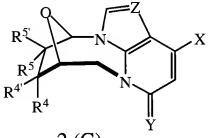
29. (New): A compound of the general formula 2 (E-H), 3 (C-D), 4 (C-D), 5 (C-D), 6 (C-D), 7 (D-F), or 8 (B):



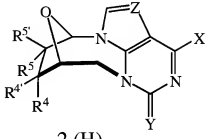
2 (E)



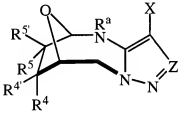
2 (F)



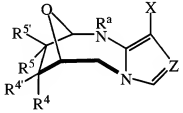
2 (G)



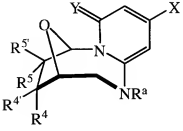
2 (H)



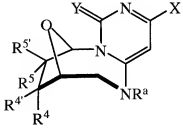
3 (C)



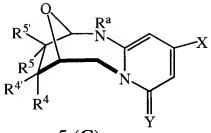
3 (D)



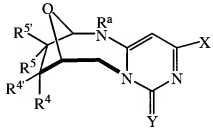
4 (C)



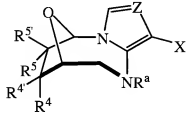
4 (D)



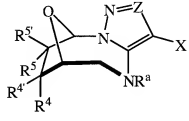
5 (C)



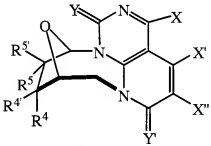
5 (D)



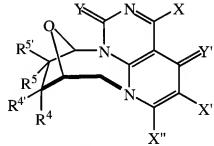
6 (C)



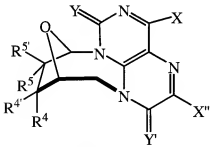
6 (D)



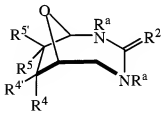
7 (D)



7 (E)



7 (F)



8 (B)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl,

alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(e) Z is CH, CX, or N;

(f) each X, X', and X" is independently hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(g) each Y and Y' is independently O, S, NH, NR^c, NOR^c, or Se;

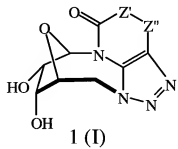
(h) each R^a is independently hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6; and

(i) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl;

optionally with a pharmaceutically acceptable carrier provided that for compounds of formula 2 (H), when X is OH, Y is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$

is hydroxyl, and R^5 is hydrogen, Z is not N and for compounds of formula 8 (B), when R^2 is NH, R^a is hydrogen, and R^4, R^5, and $R^{5'}$ are hydrogen, $R^{4'}$ is not hydroxyl.

30. (New): A compound of the general formula:



1 (I)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each Z' and Z" is independently CH, CX, or N;

(b) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c; and

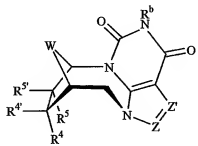
(c) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl;

optionally with a pharmaceutically acceptable carrier.

31. (New): The compound of claim 21 wherein the compound is formula 1S.

32. (New): The compound of claim 21 wherein the compound is formula 1O.

33. (New): A compound of the general formula:



or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is independently CH or CX and Z' is independently CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

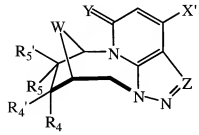
(f) R^b is R^c, OR^c, NH_2, NHR^c, or $NR^cR^{c'}$; and

(g) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

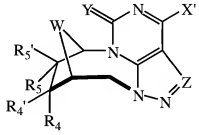
(h) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier.

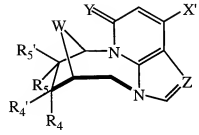
34. (New): A compound of the general formula 1 (AG-AJ):



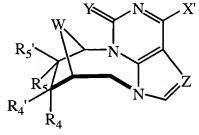
1 (AG)



1 (AH)



1 (AI)



1 (AJ)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(f) X' is alkyl;

(g) Y is O, S, NH, NR^c, NOR^c, or Se;

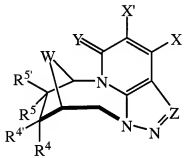
(h) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(i) W is O or CH_2;

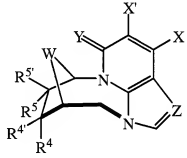
optionally with a pharmaceutically acceptable carrier.

35. (New): The compound of claim 34, wherein W is oxygen.

36. (New): A compound of the general formula 1 (AK) or 1 (AL):



1 (AK)



1 (AL)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(f) X' is halogen (F, Cl, Br, or I);

(g) Y is O, S, NH, NR^c, NOR^c, or Se;

(h) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(i) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier.

37. (New): The compound of claim 36, wherein W is oxygen.